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Research Article

Mediating Iranian EFL Senior High School Students' Vocabulary Acquisition: The Role of SHAD Application in Technology Enhanced Setting

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ABSTRACT

Social networking applications, as innovative devices, have recently played a leading role for empowering second language vocabulary learning. The present study investigated the expansion of academic vocabulary knowledge of English as a foreign language student making use of SHAD app compared to the traditional method of vocabulary instruction. The study also attempted to search the students' outlooks about the effectiveness of SHAD app in the process of learning vocabulary. About 60 Azarbaijani Turkish EFL students participated in the study. The participants belonging to intact classes from the first grade of secondary high school in Tabriz. After homogenizing the level of English knowledge of students using Oxford Placement test, they were divided into two groups of treatment group and control group. A 100 items pretest in the form of VKS was administrated to the learners to recognize the final 80 unknown words marked by the students in order to be taught during the treatment. The learners in the treatment group exposed to instruction of new words via SHAD application, and the

learners in the control group learners' new words in the traditional classroom. During treatment, the experimental group completed and presented their vocabulary homework assignment via SHAD app, while the learners in control group were required to submit the identical homework assignment making use of the paper and pencil method. After treatment, a 30-item posttest in the form of multiple-choice was presented to the groups. Data was gathered through pretest-posttest and it was analyzed through independent samples t-test. Results of t-test conveyed that the group of SHAD app meaningfully outperformed the traditional one on a vocabulary test. In addition, implication for teaching vocabulary and future studies are argued.

Keywords: Senior high school students, SHAD application, Technology enhanced setting, Vocabulary acquisition

1. INTRODUCTION

Nowadays, digital world has been affecting nearly all aspects of the people's lives, especially students from all over the world tend to spend most of their time with one inseparable tool called mobile device. One of the fundamental devices linked to virtual learning can be smart phones. In recent years, making use of Internet by smart phones has been an inevitable and unavoidable part of people's routine lives. Furthermore, a great proportion of the individuals' social and private communications occurs online and as a consequence, the social devices play a leading role in the interactions of various people from diverse backgrounds. With this outstanding value, it seems quite crucial to flash numerous investigations in the field of Virtual education, and in particular MALL (Mobile Assisted Language Learning) and then scrutinize their impacts on language learning. In addition, the immediate growth of technology and new generation of smart phones with high technology have created the opportunity for both instructors and learners to consider this device as a vital companion of the educational purposes. In brief, technology is regarded as the collection of techniques, methods, skills, and processes used in the production of goods, services, or in the accomplishment of objectives such as scientific investigation (Hsu, 2013). As mentioned by Kaplan and Haenlein (2010, p.59), "social media is a group of Internet-based applications built in the ideological and technological foundation of web 2.0 which allows the creation and exchange of user-generated content." Therefore, the current study is going to have a glance at one of the applications of virtual education called *SHAD app* which is one of the web-based applications serving private and exclusive online for both school teachers and students. This newly founded application has been run by Iranian software engineers with the direct observation by Ministry of Education due to the successive school vacations of the whole country during Corona Virus Pandemic in April 2020. SHAD application is being merely designed for the virtual instruction of the Iranian school students and the students are obliged to attend the predetermined classes in particular hours the same as their school timetables in the schooldays. It is worth mentioning that either parents or students themselves can install the given prescription and then can choose the 'student' item to enter the application and ultimately can enroll themselves successfully by entering their personal information to this app. It means that the personal information of the whole students already exists in the application and this issue is indicative of a private application designed only for the extended family of Iranian Ministry of Education.

As it was cited, SHAD app is an absolute Iranian-made application and the government has spent a lot of budget and time on this application to meet the needs of both teachers and students at the same time. This application tries to compensate for the non-taught materials of the educational year of the whole country because of Corona Virus pandemic. Most significantly, this application has not been designed for public use but for the educational demands of school students whose names have been registered formally in the Ministry of Education. This application gives the rights only for the school principals and teachers to add their own students to the alternative lesson material groups like English, Chemistry, Biology, and so forth. Prior to this application, there did not officially exist any approved educational social network application in the country and as a result, the Ministry of Education is considering some serious strategies in order to promote this application, correct its software defects, and ultimately looks forward to supplying the educational needs of more than fifteen million students by utilizing this domestic-made software throughout the country.

Although there has been a large growing body of research either theoretically or empirically on the Internet Technology, i.e., virtual learning, smart phone applications, and their fundamental effects of learning on the students' educational backgrounds, nearly no study has been administered about the impression of SHAD application on language learning of the Iranian EFL senior high school students simultaneously.

In general, there exist various investigations about the effect of alternative smart mobile phone applications on language learning components throughout the world like Telegram, WhatsApp, YouTube,

and so on. However, there exists nearly no research like this study which wishes to analyze the impact of SHAD app on vocabulary acquisition of high school students in Iranian educational context. Due to enduring existence of Corona Virus or Covid 19 throughout the country, Ministry of Education relies heavily on this application according to its vital and prominent role in arranging and organizing the future lesson materials of the students since they must not attend schools and continue their school lessons through online learning in the coming days. To this end, the present study attempts to investigate the impact of SHAD application on vocabulary acquisition of Iranian EFL senior high school students. The term vocabulary refers to "a list of words for a particular language or list or set of words that individual speakers of a language might use" (Hatch & Brown, 1995, p.12). About the significant role of vocabulary Wilkins remarks that "without grammar little can be conveyed, without vocabulary nothing can be conveyed" (1972, p. 111).

Therefore, the study desired to make an attempt to meet the needs of Iranian EFL students in the field of vocabulary learning and facilitate the students' vocabulary acquisition by using SHAD application. In addition, it had a glance at paving the ground for the latter investigations to concentrate on the impacts of the aforementioned application on other linguistic skills like reading, writing, listening, and the other linguistic components such as grammar and so forth. Based on the aim of the study, an attempt was made to seek the answer to the following research question:

RQ. Is there any significant difference between students' learning of vocabulary knowledge by utilizing SHAD application in comparison to the traditional face-to-face instruction?

2. REVIEW OF LITERATURE

With the spread of the Corona virus and the long-term closure of schools, the Ministry of Education, in cooperation with the Radio and Television, began broadcasting educational programs on television so that students could learn at home. Broadcasting educational programs on television greatly helped to keep students from falling behind, but these measures were not enough due to problems such as the inability to fix problems and the unavailability of accurate statistics of students watching the programs. As a result, a large number of teachers and students turned to various social networks to pursue teaching and learning. In this way, students could communicate with their teachers and ask questions and fix their problems which, of course, did not exist on television. However, this method also had its drawbacks, the most important of which was the uncertainty about the safety of the social media platform for students. The Ministry of Education also decided to integrate all these connections of teachers and students in different social networks through a system called SHAD system. But in order to protect the rights of teachers and students and create a safe environment for education, SHAD application was produced and presented, which is a separate and independent social network for students and teachers.

SHAD app is currently designed and released only for the Android operating system, although news indicates that the Windows and iPhone versions will also be released. Currently speaking, those who do not have access to an Android phone can use the web version of the application on their computer or Apple phones. Teachers can enter the app just by entering their phone number. The teacher's mobile phone must be compatible with the documentation system. If they do not succeed in entering the program, teachers should ask their school principal to edit their information in "Sanaad Documentation System". Students must also use their mobile phone number to enter SHAD App. It should be noted that this mobile number must be the same number that is synchronized on the site or it must be registered on document system.

According to Hiva educational counseling site, SHAD app is a social network fully dedicated to teaching and learning for school students across the country and is supplied with various facilities. Features of this

program include the ability to save the class and the provided content, delete and edit sent messages, sending a variety of audio and video text files up to 100 MB, the ability to transfer information from one phone to another, two-way and interactive communication among students and teachers as well as the possibility of online attendance.

Although SHAD app is a new step in the country's education system and has various facilities, but there is a lot of room for improvement. Features that can be added to this program in the future include the ability to send a live image or audio of the teacher (stream), the ability to share part of the phone or desktop screen for all classes, holding virtual tests and exams, issuing transcripts , Sending weekly attendance reports to parents, parents' active presence in SHAD application, special group for ethical issues, counseling, and the possibility of attending the program of multi-grade classes, preschool and literacy movement. Following are some dominant characteristics of SHAD application.

Frankly speaking, this field of study about SHAD app is absolutely first-handed and fresh since it is a newly born application and has also been created by Iranian software engineers due to the existence of Corona Virus. However, in general a number of researchers have started to have some relevant and purposeful investigations about the usefulness of this application. In other words, a lot of associated studies in order to achieve meaningful outcomes about this application are under operation by some researchers. Speaking in large scale, there have been a great number of researches about the effectiveness of some social media applications such as Telegram, WhatsApp, YouTube, and a number of others on teaching and learning processes. For instance, (Pirouz,2015; Ashyan & Salehi, 2016; Mashhadi & Kaviani, 2016; Gaem & Golshan,2017; Zarei & Heidari Darani & Ameri-Golestan, 2017) have administered studies to investigate the effect of social media applications such as Telegram and WhatsApp on vocabulary learning of Iranian EFL learners recently. Those researches have been in favor of using mobile applications in teaching and learning process and have concluded a number of positive impacts of Telegram and WhatsApp on vocabulary learning of EFL students. Following are some related studies on online learning.

Şendurur and Yildirim (2018) investigated the effects of web-based scaffolding in comparison with teacher scaffolding (TS) and no scaffolding (NS) on students' metacognitive skill development in web-search process. The study utilized a static-group pretest–posttest quasi-experimental design. The first experimental group received web-based Internet search scaffolding (WISS) tool treatment; the second experimental group received TS; and the control group had NS. Receiving WISS during an Internet search had a significant effect on the improvement of metacognitive skills when compared with NS; however, it was not significant when compared with TS. While WISS group's scores in all subscales improved significantly compared with those of NS, TS's strategy generation scores were significantly higher than those of NS group. Moreover, WISS group's control of attention scores were significantly higher than those of TS group.

Ngo (2019) observed that learning through a platform in an asynchronous online setting showed a constant development of students reading, writing, listing, and speaking skills of the English language, parallel to the traditional classroom environment (Martin et al., 2012). It is worth of mentioning that developing students' "sense of belonging to a learning community" could endorse their motivation and cooperation (Falloon, 2011). This showed that traditional classrooms could be replaced by synchronous virtual classes (Barbosa & Barbosa, 2019).

Many studies about synchronous virtual classrooms via mobile applications examine the learning outcomes of students in total "distance learning" where lectures are basically structured for educational purposes. The nearest practice could be taken from mixed-mode teaching labeled 'synchronous hybrid virtual classroom' involving two groups of students (one onsite and the other online contributing in the same course (Raes et al, 2020). Though, one should not disregard that sometimes unpredicted factors may cause uncommon

breakdowns to traditional classroom environments.

More recently, Abedi et al. (2019) in an attempt to answer the research question about whether the online classroom instruction have any effect on Iranian EFL learners' English composition writing, concluded that applying the online classroom instruction can significantly expand the skill of writing. They illustrated that learners taught the English composition writing skill through the online classroom instruction performed more successfully on the post-test than those who taught through the traditional instruction.

Najafi, Heidari-Shahreza and Ketabi (2021) tried to investigate the effects of Adobe Connect virtual classrooms on Iranian medical students' technical vocabulary performance. In addition, the study aimed to investigate medical students' perceptions towards using the strategy, its effect, and the merits and demerits. To this end, 78 upper-intermediate female and male medical students who learning English as ESP field from Islamic Azad University, Kashan, Iran were selected as the sample of the study. Through Nelson, 60 medical students whose scores in homogeneity test were between one standard deviation above and below the mean were selected as the participants of this study. Then, the selected participants were randomly categorized into two groups of experimental and control. The instruments for the study were Oxford Placement Test (OPT) as proficiency test, technical vocabulary test as pretest and posttest, personality traits questionnaires, and a semi-structured interview. Following, the treatment on Adobe Connect virtual classroom and traditional method of vocabulary instruction began. The results showed that the learners in Adobe connect virtual classroom outperformed control group in vocabulary performance. Furthermore, the results of interview approved the results. In addition, the Adobe connect virtual group learners' levels in personality traits significantly improved after the treatment in self-regulation, self-concept, and autonomy, but not in anxiety.

Gherhes et al., (2021) more recently focused exclusively on the beneficiaries of the educational process and aimed to find out their perceptions of face-to-face and e-learning and their desire to return, or not, to the traditional form of education. These perceptions were represented by 604 students of the Politehnica University of Timisoara, who were asked to respond anonymously to an 8-question questionnaire between December 2020 and February 2021. The results show the respondents' levels of desire to return to school (especially of those who have only benefited from e-learning) and their degree of involvement during online classes. The results also specified the advantages and disadvantages of the two forms of education from a double perspective, namely that of first-year students (beneficiaries of e-learning exclusively), and of upper-year students (beneficiaries of both face-to-face and e-learning). The study pointed out key information about e-learning from the students' perspectives, which should be considered to understand the ongoing changes of the educational process and to solve its specific problems, thus ensuring its sustainability.

Considering the literature on the mediated learning, the researchers came to a conclusion that no study had investigated the role of two strategies of vocabulary learning via SHAD application and traditional method of vocabulary instruction in a context like Iran with senior high school learners. What adds novelty to the present study is the fact that the study of the effect of SHAD application on vocabulary acquisition of senior high school learners is under-researched area. Therefore, this study was an attempt to fill this gap and contribute to the existing literature on the role of online learning tools in learning English as a foreign language (EFL) context.

3. METHODOLOGY

3.1. Design

The design of this study is quasi-experimental in nature. It used a pretest posttest design with a control group. Furthermore, the participants were selected based on the convenient sampling.

3.2. Participants

In order to gather the essential data, a sample of 100 out of 300 males second grade high school students aged between 15 to 17, learning English as a foreign language in Ostad Shahriar, Allameh Jaffari, and Mostafa Khomeini Public Senior High Schools in Tabriz, East Azarbaijan Province were randomly selected to participate in the current study. The participants were chosen out of a population of 300 English language learners of first grade of senior high school belonging to three various senior high schools via a proficiency test. It is worth mentioning that all of the students received the same instruction quality by the researcher himself as the teacher and the number of conducted activities and assignments in each class were exactly the same in order to maintain consistency between the experimental and control groups. The English level of all of the participants of the study was estimated as lower-intermediate. After their homogeneity level was confirmed through proficiency test of Oxford Placement Test (OPT), they were non-randomly divided into two equal groups of 30 students in the experimental and control groups respectively. It was a must for experimental group to have an access to smart phones with SHAD app to be installed and the teacher had to clearly explain about the prominent issues about the app usage before the treatment was about to start.

3.3. Instruments and Materials

A number of instruments were utilized so as to gather the data for the study. The research instruments were composed of Oxford Placement Test (OPT), pretest in vocabulary, posttest in vocabulary, and SHAD application as follows:
An extracted model of Oxford Placement Test was administered so as to ascertain the homogeneity of the participants of the study in accordance with their language proficiency. The test was composed of 60 questions in order to measure the homogeneity of the participants considering their language proficiency and also choosing the students at the same level (lower-intermediate). The test consisted of various items such as vocabulary, grammar, reading comprehension, and cloze test in general. The results of the test were evaluated on the basis of OPT associated level that was the scores between 30-35 for the lower-intermediate level and the passed scores were regarded as lower-intermediate level for the study.

The vocabulary knowledge scale (VKS) is a 5-point self-report scale developed by Wesche and Paribakht (1996) that permits students to express how well they know items of vocabulary. In the current study, the students were given a copy of the VKS handout. In order to assess the students' partial vocabulary knowledge making use of (VKS), 100 words from the four lessons of "Vision 1" were shared to the participants of the study in order to assess whether the students have mastered those new words or not. The students were not allowed to use any dictionary throughout the assessment. They were obliged to make a correct sentence with any given word within the definition of that word. The final 80 unknown words marked by the students were selected as the final ones to be taught during the treatment to both experimental and control groups.

The researcher developed a 30-items vocabulary posttest in multiple choice format from among the vocabularies taught during the treatment period, but before administrating it to the learners, it was piloted in an isolated session in order to report the reliability and to remove any misunderstanding about the items. The reliability was estimated through Cronbach Alfa and the value was reported to be 75. The total score of posttest was 20. For the aim of the validity, three experienced from the high school under study judged the posttest and they reported the validity of the test.
SHAD is a multiple platform application which can run on Android, Windows Phone, Nokia, and etc. Hence, it is absolutely an Iranian-made application and the government has spent a lot of budgets on this application to meet the needs of both its teachers and students at the same time. This application tries to compensate for the non-taught materials of the current educational year of the whole country because of the unexpected existence of Corona Virus pandemic.

Only the experimental group were allowed to install SHAD app and then they could enter that app during the treatment. In other words, this app was only regarded as a host of experimental group and the students were taught a list of approximately two hundred words within ten sessions for about five successive weeks. The allotted teaching time was about ninety minutes for each session for both experimental and control groups. The experimental group was let to share any useful information relevant to the new words such as photos, banners, dictionary definitions in SHAD app whereas the control group learnt the new words using only their course book in traditional way.

3.4. Data Collection and Analysis Procedures

To achieve the purpose of this study and address the question posed, certain procedures were considered as follows:

To make the participants homogeneous regarding their total knowledge of English language, a validated proficiency test was administered to 100 EFL learners before the students were about to receive the first list of vocabulary test items. The proficiency level of the students was administered according to Oxford Placement Test (OPT) prior to the beginning of the treatment. After analyzing the results of OPT, 60 students were obtained one standard deviation above and below the mean in OPT and they were divided into two groups of experimental and control groups. The students in the study were delivered the identical list of a total number of 200 words and then by using Vocabulary Knowledge Scale (VKS), they were allowed to indicate how well they know the vocabulary items.

After the 80 unknown vocabularies were identified by the students themselves, the final word lists were approved and delivered to the students of the both groups and they were taught during 8 sessions (10 new words per each session). Two sessions with time duration of 90 minutes were allotted per week. The experimental group was allowed to have an access to SHAD application in parallel with various monolingual and online dictionary applications, like Longman mobile and Concise English dictionaries to acquire the concept of the target words.

Simultaneously, participants of the control group were instructed on the basis of the previous routine methods and principles in the classroom Hence, it was fully emphasized that only the experimental group were able to send, receive, and share the assignment and important points linked to the word lists via SHAD application regarding the direct observation of the instructor during the treatment. After the completion of the treatment, an identical posttest was administered to both groups in order to measure the students' vocabulary acquisition in the final session. The type and time of test were exactly set the same for two groups. Then, by utilizing descriptive statistics and the independent sample t-test, it was assured that there

was statistically outstanding difference between those in the control and experimental groups respectively. At the end of the treatment, the improvement and probable diversities between the two groups were analyzed through t-test. After the collection of the required data, the Statistical Package for Social Sciences (SPSS,26) was used via the process of data collection and the outcomes of the study were analyzed by *t*-test i.e., mean, standard deviation, standard error of mean. In other words, in order to have a comparison among the obtained scores and ascertain the validity and reliability of the test, an independent t-test was run to see whether there existed any considerable bias in the performance of the participants of the study or not.

4. RESULTS AND DISCUSSIONS

To ensure the homogeneity of the groups in this research, the data obtained from the proficiency test was analyzed. The Oxford Placement Test was administered to 100 students in order to select homogenized subjects to participate in the main study. The students whose scores on the OPT was between 30 and 35 were selected. As a result, 60 learners were selected. Table 1 displays the descriptive statistics of groups on the OPT.

Table 1
Descriptive Statistics; Oxford Placement Test by Groups

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	30	34.53	3.235	.591
Control	30	34.37	3.253	.594

Based on the results displayed in Table 1 it can be claimed that the experimental (M = 34.53, SD = 3.23) and control (M = 34.37, SD = 3.25) groups had had fairly close means on the OPT test. An independent t-test was run to compare the experimental and control groups' means on the OPT test in order to prove that they enjoyed the same level of general language proficiency prior to the main study (Table 2).

Table 2
Independent Samples t-test; Oxford Placement Test by Groups

	Levene's Test for Equality Variances		oft-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.003	.960	.199	58	.843	.167	.838	-1.510	1.843

Equal variances assumed	not	.199	57.998	.843	.167	.838	-1.510	1.843

The results of the independent t-test (t (58) = .199, p > .05, 95 % CI [-1.51, 1.84], Cohen's d = .051 representing a weak effect size) indicated that there was not any significant difference between the two groups' mean scores on the proficiency test. Thus, it can be claimed that they enjoyed the same level of general language proficiency prior to the main study. The negative 95 % lower bound confidence interval of -1.51 indicated that the difference between the two groups' means on the proficiency test could have been zero. So, the above-mentioned conclusion as no significant difference between the two groups' means was correctly made. It should also be noted that the assumption of homogeneity of variances was met (Levene's F = .003, p > .05). That is why the first row of Table 2, i.e. "Equal variances assumed" was reported.

Before the treatment, a pretest in vocabulary was used to investigate the number of unknown words in order to be instructed during the treatment, hence the aim of pretest in vocabulary was not investigating the homogeneity of the learners in vocabulary knowledge before treatment, but it was used for investigating the unknown vocabularies for the aim of the treatment. After treatment, a posttest in vocabulary was designed by the researcher, but before using it, the test was piloted by a sample of high school students. The pilot study was performed on fifteen EFL learners of the same age and proficiency level in order to check the internal consistency or reliability of the vocabulary post-test. Descriptive statistics of pilot test on post-test, such as mean, standard deviation (SD), standard error of measurement (SEM) and the item facility (IF) index of the test items are provided in Table 3. The items with facility index above 0.63 were too easy and below 0.33 were too difficult. Three items (two easy and one difficult) were revised.

Table 3

Results of pilot study of posttest.

	Mean	SD	SEM	IF < 0.33	0.33 ≤ IF ≤0.63	IF > 0.63
Post-test	13.8	6.71	3.44	1	17	1

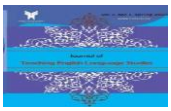
After treatment, the posttest was used. Table 4 shows the results of descriptive statistics in posttest of vocabulary.

Table 4

Descriptive statistics of posttest in vocabulary

	Group name	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
	SHAD App	30	17.03	1.67	.305
	Control	30	14.83	1.62	.307

Table 4 reveals that the mean scores of students received instruction via SHAD application is 17.03 with the standard deviation of 1.67. While the mean score of students received traditional instruction in vocabulary learning is 14.83 with the standard deviation of 1.62. As it is clear from the above table, the means of the pretest and posttest in song group were different. However, the differences between them needed to be tested statistically, thus, the assumption of parametric test needed to be tested. One of the assumptions is that the data should be normally distributed. Table 5 shows the test of normality of



vocabulary test in posttest of groups.

Table 5

Kolmogrov-Smirov tests of normality of vocabulary posttest in groups

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Treatment	.138	30	.200*	.939	30	.0665
Control	.128	30	.200*	.962	30	.532

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The Sig of treatment group with df = 30 is .0665, and the Sig of posttest in control group with df=30 is .532. As both of the significance levels are higher than 0.05; thus, the data is normally distributed, then it is time to run an independent samples t-test to test the hypothesis. As already stated, the data was normally distributed, hence there is a need to run an independent samples t-test to test the hypothesis. Table 6 shows the results of independent samples t-test.

Table 6

Results of independent samples t-test for posttest of vocabulary

	Levene's Test Equality Variances		fort-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	2.338	.130	1.9	30	.047	21.780	11.27	-.6508	44.212
Equal variances not assumed			2.3	30	.027	21.780	9.326	2.615	40.945

According to the above table, Levene's test of the equality of variances is F=2.33 with a significant level of .047. Since the Sig value is less than the p values, hence, it can be concluded that there is a significant difference between two groups in vocabulary achievement. Furthermore, based on mean comparisons, the means of SHAD group in posttest of vocabulary is 17.03, and the means of control group in posttest of vocabulary is 14.83. As it is clear the means of both groups in posttests are different with the mean of SHAD group higher than the mean of control group on posttest of vocabulary, hence based on the results, SHAD group outperformed control group in vocabulary learning. Then, the hypothesis that claimed "There is a significant difference between students' learning of vocabulary knowledge by utilizing SHAD application in comparison to the traditional face-to-face instruction" was supported at p value less than 0.05.

The study aimed to investigate the impact of teaching vocabulary by means of SHAD app. The achieved findings indicated that those students exposed to the new words via SHAD app had higher achievements in contrast to those ones instructed via the routine traditional methods in the class. Therefore, expressing vocabulary components through SHAD app seems to be more influential and could result in authentic outcomes. Moreover, the study is in favor of the fact that linking lexical elements with alternative sorts of media such as SHAD app considerably cultivates strength of recall cues and promotes the probability of retention of those words. One justification for the improvement can be the high involvement in the virtual context of online learning by high school students. The other reason can be that Iranian young students re familiar with online applications and virtual learning, so they can adopt themselves in the virtual classrooms with different online tools and applications such as SHAD App. It is worth noting that the validity of the claim would be estimated by on-line protocols and interviews from the participants under study.

The other reason can be the integration of technology and student-centered rather than teacher-centered approach improved EFL learners' vocbulary performance in the current study. Technology has become an integral part of educational settings. Wells, de Lange, and Fieger (2008) have suggested that technological advancements have significantly altered the ways educators teach and students learn. Moreover, teachers all over the world have felt a hidden pressure to integrate technology in their lessons. This pressure force teacher to re-evaluate their teaching styles. Rather than avoiding the call, educators should incorporate technology into their teaching, applying its advantages towards achieving learning objectives. The opportunities presented by technologies in education are limitless and borderless. Therefore, teachers are in search for ways to incorporate technology into their classrooms to create better learning opportunities for their students (Koehler, Mishra, Hershey, & Peruski, 2004). Enriched learning environments with the use of technologies can offer students better learning opportunities (Means, 1994). Because new technologies offer them unique opportunities, language teachers have especially been integrating technology into their lessons more and more (Seljan, Banek, Špiranec, & Lasić-Lazić, 2006). With the use of these technologies, the aim of teachers is to present rich learning experiences to the students and to create more engaging and motivating classroom atmosphere.

The results of the current study are in line with Donmus's (2010) study that researched to achieve information about using educational online tools and applications such as games with the support of social networks in foreign language education. The result of his study showed that students who continuously interacted with Facebook benefited from educational games. In addition, the results are in congruent with Sudarmilah, et.al. (2020) who tried to make it easier for children to understand and foster vocabulary acquisition and to develop children's motivation in the learning process as this learning media is designed with an attractive and interactive interface. The Edugame application which emphasized an android-based visual form was established as a support to the development of children's speech and reading skills. The development method used in designing this application is the prototyping model which consists of the needs analysis, prototype design, prototype evaluation, program writing/coding, program testing, program evaluation, and implementation. The Edugame application as vocabulary learning media for deaf children promotes an interesting and interactive learning process to improve children's understanding of words in learning vocabulary.

In an identical study about Telegram impact on vocabulary acquisition by Heidari Tabrizi and Onvani (2017), EFL beginners also indicated that they profited from learning new words given to them via Telegram. Generally speaking, it appears that making use of social networking has been very common among English language students throughout the world and is a device which is capable of aiding both teachers and students to obtain data and activate the learning/teaching of English, particularly the acquisition

of vocabulary items (Mashhadi Heidar & Kaviani, 2016; Srinivas, 2010). However, the results are not in congruent with some previous research (Church & de Olivia, 2013; Salim, 2013). These studies have reported that social networks are assumed by many teachers and students as informal communication devices which are not suitable for formal communication needed in educational settings.

Our findings on online skill learning are in line with those of previous studies (Abedi et al., 2019; Blattner & Lomicka, 2012; Gilakjani, 2018; Gorjian, 2011; Khazaei & Dastjerdi, 2011; Mompean & Fouz-González, 2016). For instance, Blattner and Lomicka (2012) investigated how social networking sites, as a type of e-learning setting, are used in a language course and how students respond to them. Like the current study, they intended to examine the attitudes of language learners and teachers regarding the use of Facebook (FB) in an academic setting. Based on their findings, students reacted positively to the use of FB in their language classes as it provided a real audience. In the same vein, Mompean and Fouz-Gonzalez (2016) reported on the effectiveness of Twitter in pronunciation learning in an EFL context. The purpose of this study, as stated by researchers, was to examine whether this social media can foster online participation (EFL learners' motivation) and the extent to which it may positively affect the pronunciation of some widely mispronounced words by EFL learners. Our findings also confirm those of Abedi et al. (2019), who inspected online classroom instruction in an Iranian context and found good improvements in students' writing capabilities. Despite studies on online classes, such as ours and previous research, there are challenges and room for improvement. We think that more empirical studies are warranted, especially on classroom dynamics, student anxiety, and student attitudes.

In the particular context of Iran, there have been similar findings in terms of applying mobile applications in EFL programs. Tahriri, Azim Dokht, and Derakhshan (2013) found teachers' positive attitudes towards mobile uses in instructional settings. In addition, Mollaei and Riasati (2013) undertook a study on Iranian teachers' attitudes towards applying the mobile applications and reported teachers' satisfactory feelings. Sadeghi, Rahmany, and Doosti (2014) found that teachers who worked with computers more than others had positive attitudes towards CALL approaches. Gilakjani (2018) showed teachers' interest in using mobile technology, which provided an enjoyable and interactive environment, helped obtain accurate pronunciation, and improved the quality of pronunciation instruction.

As it is clear crystal, there is discrepancies in the results obtained by different researchers mentioned above, which this consequently indicates the necessity to pursue further studies in the big field of virtual classrooms with various educational tools and applications. To sum up, understanding the potentials of different learning environments and ways to implement new technology to foster students' independent learning could be of great value. The information would be influential and applicable to teachers and stakeholders to equip learning environments with new tools and mobile-based applications instructions. Consequently, learners would become autonomous and responsible in their learning. Online learning is only one contributing factor among vital factors.

5. CONCLUSION

This study searched the impact of teaching vocabulary through SHAD app in second high schools of Tabriz city in East Azarbaijan province. The findings of the investigation emerged that vocabulary acquisition could be facilitated via presenting the words through SHAD app. In common, it can be emphasized that because of the impressive effect of SHAD app as a technological device which has previously confirmed to

be received by Iranian EFL students, acquisition of the new lists of words might also be further facilitated since students could simply associate the conceptions of the words with the interesting dictionaries and various banners shared by their teachers via SHAD app in their mobile phones. On the other hand, EFL students formerly did not have the opportunity of learning those new words in old-fashioned and physical classroom teaching method. In addition, the double impacts of learning vocabulary in a new atmosphere (i.e., SHAD app) in parallel with fantastic facilities existing in smart phone devices such as going live programs by the teachers, installing diverse monolingual and bilingual dictionaries of different levels, having an access to different English educational websites, and sharing colorful ideas in SHAD app while teaching by the students have caused the preference of that app to the traditional way of learning vocabulary by a large number of EFL students in Iranian community.

Commonly speaking, this study confirmed that SHAD app, as a formal and virtual platform for learning, could be supplied to their private necessities of students and inspired them a sense of safety and self-confidence. After the emergence of an unwanted illness called Corona virus, SHAD app has been tangibly succeeded in approving itself as the most fruitful app among Iranian EFL students. On the other hand, due to its ubiquity, ease of availability, and comfort of its utilization, the students were satisfied with making use of this virtual app. The afore-mentioned criteria can comparatively describe the outperformance of SHAD app in Iranian educational context.

Despite the various complaints of educational experts about the low facility of this app at the first days of its performance, its facilitative role in helping Iranian EFL students' with their vocabulary acquisition seems brilliant. Narrowly speaking, due to the ubiquitous presence of other social network apps such as Telegram, Whatssapp, and sorts of alike as dominant apps in the realm of vocabulary teaching and learning by many teachers and learners in different parts of the world, SHAD app has been able to meet the needs of more than 15 million Iranian students annually and there is a hope that the newly born and powerful app will be able to be fruitful to the students in educational objectives better than ever. Moreover, due to free online possibility by the whole students throughout the country, the attractiveness of using this app is increasing every day and the students have received the use of this app by their open arms. Hence, this worthwhile characteristic of SHAD app has turned this educational device to one of the most fundamental virtual tools among Iranian teachers and students. The authentic outcomes can be described on the grounds that unlike the conventional expressing of vocabulary in the printed frame, SHAD app vocabulary acquisition can be considered more enthusiastic for the students. On the other hand, students in SHAD app are immediately supplied with their desired conceptions with no disturbance in reading process, a problematic issue originated from an obstacle of searching words in a dictionary in the printed form. In brief, the study signalized the reality that the development of technology, in common, and social networks, in particular, needs to be received warmly by the educational experts as an unavoidable fact, particularly when the aim is teaching and learning a language.

The results of this study have repercussions for educators, students, test producers, and content creators. In light of the results, it is fully proposed that the other language teachers can consider using SHAD app in teaching vocabulary and other fields of language in general, providing that the Ministry of Education would give the permission of releasing that app throughout the country. In other words, the software experts of SHAD app should share their golden experience with other private language institutions and allow them to use this useful and developed app in their teaching language process. Since it was cited earlier, SHAD app was exclusively generated for the Ministry of Education and it was named as a private app just for its teachers and students during Corona Virus Pandemic. Moreover, SHAD app has created the opportunity for the EFL teachers to teach a large number of vocabulary items beyond any limited time through that app since it is active and online every moment and there is no time limitation in loading some new words in that app. Therefore, the outcomes of learning new words in SHAD app could be definitely better than those ones

in traditional and face-to-face method. Furthermore, teaching vocabulary via SHAD app will aid teachers meet the needs of all their students, especially those ones feeling shy in expressing themselves freely and do not have any con-self to impress themselves fluently in old-fashioned method. On the other hand, those shy students with lower interaction trend were easily able to activate their abilities of learning vocabulary through SHAD app in successful manner. Hence, some rules by the side of teachers seem vital in order to monitor the virtual class and also make the students concentrate on their task. As a matter of fact, students tend to spend a great deal of time chatting and maybe this issue will deviate them from the main aim of learning vocabulary in SHAD app. Consequently, the teachers should consider some ideal rules so as to monitor their students while attending SHAD app and maximize the achievements of virtual learning.

In sum, more studies seem crucial to further scrutinize the effect of SHAD app on vocabulary acquisition of students across various levels of study. In a more comprehensive opinion, it is essential to examine the performance of SHAD app in other language skills and components in order to have mere analyses on this newly created app. A range of alternative studies will be required to further examine the effectiveness of SHAD app on vocabulary learning of Iranian students across various levels of proficiency. It will be fruitful to concentrate on more than one component of English learning skills such as reading comprehension, speaking, listening, pronunciation rather than sticking just to vocabulary item to involve he broader field of language learning perspectives via SHAD app so as to better scrutinize the practical usefulness of that app. It is worth mentioning that since this app has been recently created due to meet the needs of Iranian school students during the existence of Corona Virus Pandemic throughout school vacations and it is natural and obvious that this app is accompanied with some software defects in some cases low quality voice recording, late loading of the sent pictures, and so forth. Occasionally, it is becoming updated and there should be some supports by both teachers and students to practice more on this app in order to give exact feedback to the officials of Ministry of education in empowering the most qualified versions of this app. If some more studies are carried out by researchers about this newly founded app and analyze it from different educational dimensions, definitely there will be hope for this app to be named as one of the most influential and particular educational and moral application in the impending future.

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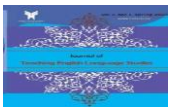

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